DOCUMENT RESUME

ED 329 057 EC 300 051

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TITLE Assessment of Students with Learning Disabilities Who Appear To Be Socially Incompetent.
PUB DATE Apr 91
NOTE 32p.; Paper presented at the Annual Conference of the Council for Exceptional Children (69th, Atlanta, GA, April 1-5, 1991).
PUB TYPE Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Elementary Secondary Education; Evaluation Methods; Handicap Identification; High Risk Students; Interpersonal Competence; Intervention; *Learning Disabilities; Models; Social Behavior; *Social Development; *Student Evaluation

ABSTRACT

This paper examines the identification of children with learning disabilities who are at risk for problems in the social domain. Based on sociometric measures, teacher rating scales, and measures administered to the children, it is found that children with learning disabilities may have problems related to rejection or related to neglect, and that these reflect different social behaviors and call for different interventions. Research related to learning-disabled children's social skills is reviewed. A five-step model is used to analyze how children process social information, focusing on encoding, mental representation and interpretation, the response search process, the response decision process, and enactment. For each step of the model, methods for assessing the social skill are suggested. It is concluded that learning disabled students differ from achieving children in their attitudes toward themselves and others' attitudes toward them; in both cases the attitudes are more negative but the source of these attitudes is not known. Learning-disabled children are less skillful than achieving classmates on measures of social cognition, role-taking, and communicative competence. They are highly motivated to avoid failure and public confirmation of their incompetence and to gain peer approval. (Approximately 80 references) (JDD)

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ASSESSMENT OF STUDENTS WITH LEARNING DISABILITIES WHO APPEAR TO BE SOCIALLY INCOMPETENT

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Paper presented at the International Conference of the Council for Exceptional Children. Atlanta Georgia. April, 1991

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I. IDENTIFY THE CHILD

A. Rationale

Historically, children with learning disabilities have been described as exhibiting a variety of aberrant, maladaptive behaviors that were supposed to characterize this category of childhood psychopathology and separate it from other childhood problems. However, with the widespread adoption of the 1975 federal guidelines (P.L.94 142) to define children as learning disabled based on a discrepancy between ability and achievement, the focus of referrals, classifications, and interventions has been concentrated on reading and math problems.

Nonetheless, a growing body of research on the social status of children with learning disabilities has led parents and professionals to reach consensus that children with learning disabilities are at risk for experiencing problems in the social domain. This consensus can be seen in the two most recent revisions of the definition of learning disabilities. The Learning Disabilities Association of America (LDAA; aka ACLD) agreed to a definition that includes the statement: "Throughout life the condition can affect self-esteem, education, vocation, socialization, and/or daily living activities (Special Education Today, 1985, p.1). The second definition was developed by the Interagency Committee on Learning Disabilities (ICLD), a committee mandated by the Congress of the United States to develop a research agenda for the field for the 1990s. The ICLD definition includes the statement: "Learning disabilities is a generic term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities, or of social skills" (Kavanaugh & Truss, 1987, p.222).

Recognition that sizable numbers of children with learning disabilities are at risk

for social problems is based in part on the many sociometric studies that have been conducted across the past 15 years. About 30 studies have been conducted and about 24 have found that children with learning disabilities are at greater risk than their higher achieving classmates to be socially rejected or ignored (Bryan, 1974; Siperstein, Bopp, & Bak, 1978; Gresham, Elliott, & Black, 1987). This vulnerability for social rejection predates first grade referrals to special education and labeling as learning disabled (Vaughn & Hogan, 1988) and continues through high school (Gregory, Shanahan, & Walberg, 1986; Perlmutter, Crocker, Cordray, & Garstecki, 1983), and young adulthood (Minskoff, Sheldon, Steidle, & Baker, 1988). Recent evidence indicates that teachers' decisions to refer a child for special education are influenced not just by poor academic achievement (Ysseldyke, Algozzine, Shinn, & McGue, 1982), but by poor academic achievement and problems in the social domain (Bender & Smith, 1990; Speece & Cooper, 1990; Bay & Bryan, 1990).

Although there is abundant and consistent evidence testifying to the vulnerability of children with learning disabilities for social rejection or ignoring, not all children have social problems. Estimates of the percentage of children with learning disabilities who are at risk for problems range from 34% (Sabornie, Marshall, & Ellis, 1990) to 46.7% (Sabornie, Kauffman & Cullinan, 1990) to 59.1% (Kistner & Gatlin, 1989). These figures are striking when you consider that children are not referred or tested for problems in the social domain. How then do we identify children with learning disabilities who are at risk for problems in the social domain. Let us look at a number of sociometric measures, teacher rating scales, and measures administered to the children.

Sociometric Evidence.

To identify children with problems achieving social acceptance we typically use two sociometric measures. One measure is a rating scale in which each child rates every classmate on a 3 to 5 point scale indicating how much they like to work with or play with each child. The second measure is a nomination scale in which children select

a specified number of classmates for various social roles (e.g., how much they like to work or play or sit next to each child). There are now more than 25 sociometric studies that have compared students with learning disabilities to achieving classmates on sociometric ratings and nominations. The greater majority have found differences favoring nondisabled children. Four or five found no differences between achieving and LD students; no studies have ever found an advantage for the learning disabled.

The results of these studies tell us the following. First, problems in gaining social acceptance are found across a wide age span. These studies have been conducted with children in kindergarten, elementary, junior high and high schools. The results consistently find that children with learning disabilities are more likely than their classmates to receive lower ratings or be nominated less frequently for positive social roles. The kindergarten study is particularly interesting because the sociometric study was done a year prior to referral and designation as learning disabled (Vaughn & Hogan, 1988). The kindergarteners' judgements preceded the classroom teachers.

Peer ratings have been criticized because they do not inform us as to why certain children experience peer rejection. Some advances are being made, at least in distinguishing between children who are rejected versus children who are neglected. Rejected children are those who receive many scores on the dislike category on the roster rating or many nominations for rejection on the nomination measure, but few positive ratings. Neglected children are those who receive few votes for either popular or rejected roles. Rejected children are more likely to demonstrate aggressive and disruptive behaviors (Coie, Dodge, & Coppotelli, 1982) report experiencing more loneliness (Asher, Hymel, & Renshaw, 1984) and are at greater risk for negative future outcomes (Coie, 1985) than neglected children. Neglected children are more likely to be shy and withdrawn (Dodge, 1983) and to experience social anxiety (LaGreca, Dandes, Wick, Shaw, & Stone, 1988). In a study of fourth, fifth and sixth grade males and females with learning disabilities, Stone and LaGreca (1990) found that among the 54% who were

classified into rejected and neglected categories, about half (28%) fell into the rejected category and about half (26% of the sample) fell into the neglected category.

The distinction between rejection and neglect is important because of its implications for intervention. Rejected children are more likely to need help controlling inappropriate acting-out behaviors, and learning more acceptable peer-directed behaviors (Stone & LaGreca, l990; Bierman, Miller, & Stabb, l987). Neglected children need behavioral interventions that focus on teaching social initiation strategies, and for reducing anxiety.

There is some evidence that girls with learning disabilities may be at greater risk for social rejection than boys (Bryan, 1974; Richey & McKinney, l978). As girls with learning disabilities have been a minority group not many studies have reported on gender differences. Yet, since there are important differences in male and female friendship patterns it is important that practitioners take sex differences into account.

Although studies have been conducted across a wide age span, from kindergarten to young adulthood, there have been no longitudinal assessments across developmental stages. Since there are dramatic differences in the way children relate at different age levels, it is important to understand that the source of rejection may change from period to the next. At preschool levels rough and tumble play is important, while shared intimacy becomes increasingly important among adolescents. We need longitudinal studies to chart the acquisition of social skills among students with learning disabilities.

When we identify children who appear to be having problems making friends we traditionally make the assumption that the reason for rejection or neglect rests solely with the child. It is important to recognize that social status is not just a function of characteristics of the child. Characteristics of the group the child happens to be in also make a difference. For instance, in groups consisting of few aggressive children, aggressive children are likely to be unpopular. In groups consisting of many aggressive

children, shy withdrawn children are likely to be unpopular (Wright, Giammarino, & Parad, 1986). Popularity is partially determined by the goodness of fit between the personality and behavior of the individual and the group. Children who have distinctive features are less likely to be popular.

In sum, the sociometric studies show the following:

1) children with learning disabilities experience problems in gaining social acceptance across a wide age range,
2) children with learning disabilities may have problems related to rejection, or neglect, and these reflect different social behaviors,
3) rejection and neglect call for different interventions
4) important sex differences may exist among students with learning disabilities
5) we know little about longitudinal changes or
6) social contextual factors that influence social status.

11. IDENTIFY THE SOURCE OF SOCIAL INCOMPETENCE

A. A MODEL OF SOCIAL COMPETENCE (DODGE, 1986)

The major shortcoming of rating scales is that they fail to identify the child's social skills deficits; there is no link between peer and teacher ratings and the reasons why the child is experiencing problems. Social competence involves a variety of skills, and a breakdown in any one could trigger social rejection or isolation. In the following sections, the research related to children with learning disabilities social skills is reviewed, along with suggestions for assessing these social skills. The review has been organized using Dodge's (Dodge, 1986; Petit, McClaskey, & Brown, 1985) 5-step model that describes how children process social information in order to respond in a social setting. The Dodge model describes a set of sequential steps that are thought to occur during each behavioral interaction, but which also may be conceptualized as enduring skills and typical patterns. The model is a transactional one in which each step affects the other. And the process requires that the individual monitor the effects of behavior on the other persons involved in the social interaction. Behavior must be altered if it is not having the desired impact.

The model assumes developmental changes in children's acquisition of social competence. Children become increasingly sophisticated in their encoding, their memory for social cues, making inferences, accuracy of interpretation, searches for responses, and enactment with age.

According to Dodge (1986) a breakdown or deviation in processing at any step can occur in three forms. First, the child may fail to act at a particular processing step. For example, the child might respond without awareness of any social cues or without evaluating *his/her response* at all. Second, the child may display a skill deficit in processing. Thus, the chid might inaccurately interpret a social cue or inaccurately estimate the probability of a successful outcome of a potential response. Third, the child may display a deviant bias in processing. In this case the child may assume a social cue has qualities that it does not have, or may readily access a particular interpretation simply because it is available.

The Dodge model is used here for a number of reasons. First, it allows us to organize data regarding students with LD in an information processing paradigm. Insofar as learning disabilities have been conceptualized as a set of problems that reflect breakdown in information processing, this allows us to bring research on social competence into the LD conceptual framework. Second, Dodge has described how each step of the model can be assessed. Although each step influences succeeding steps, the process provides at least a start to study the particular steps in which students with LD have problems in processing social information. Thus the model should provide a way to subgroup students with LD and to identify which students with LD have which problems in the social domain.

1. Encoding

The first step in social information processing is to encode the social cues in the environment. The child receives cues through sensory processes and perceives them. Because there is so much going on at any point in time, the child must learn to attend to appropriate cues, and use various strategies to store the information for later recall. Labeling, chunking information, rehearsal and mnemonic devices are used to store information.

What evidence do we have regarding encoding of social information by children with LD? Basically, none. The only evidence we can bring to bear on this step in the model is borrowed from research on their performance on learning and memory tasks conducted in the cognitive domain. For example, Speece (1987), in a study of subtypes of learning disabilities, found that across clusters students with LD showed a general deficit on speed of recoding, and that students in four of six clusters showed deficits in short term memory as measured by a digit span test. Swanson (1988), also in search of LD subtypes, found that across various measures of memory, students with LD did more poorly than nondisabled children on recall of targeted words, monitoring resources during elaborative encoding (i.e., selective attention) and monitoring of resources during high effort encoding (i.e., recall insertion scores). Bauer (1987) pointed out that students with LD do worse than nondisabled children on recall of central, but not incidental, information, use less effective elaborative encoding processes, fail to show a primacy effect on free recall tasks, and are less likely to use cumulative rehearsal or other elaborative encoding processes in free recall tasks. Students with LD were less aware of cumulative rehearsal, categorizing, subjective organization and forming associations. They are slower in learning about control processes and even when aware of control processes are less likely to learn them. Coupled with slower learning, poorer memory, and slower naming skills, Bauer reports that efforts need to be made to teach these students about control processes. It has

been suggested that recall and comprehension can be improved by providing cues concerning what should be rehearsed along with instructions on how to use cumulative rehearsal.

It remains to be determined whether students with LD would show similar problems in processing information in the social domain. Should this prove to be the case, then efforts to intervene must take problems into account at this level and teach control processes and strategies just as is being recommended in the cognitive domain.

Representation Process

The second stage of the model requires the child to engage in a mental representation and interpretation process. The child integrates the sensory cues with his/her memory of past experience and comes to a meaningful understanding of the cues. It is very difficult to distinguish between the encoding and representation steps in the model, because in order assess a child's encoding you have to assess the representation of those cues.

Research on students with learning disabilities has used a variety of approaches to assess their representation processes. One method has been to study comprehension of affect and nonverbal communication. In these studies children have to label a model expressing an emotion or identify the relationship between two or three people. The models have been presented using photos, very brief exposures using filmed presentations and more realistic presentations using video film. The results of these studies find that when the scenarios presented are familiar, routine, or concrete, children with learning disabilities have no difficulty responding as accurately as achieving children (Maheady, Maitland, & Sainato, 1984). When extraordinary care is taken to ensure children's attention, as with a reminder to attend prior to each exposure, along with rewards for accurate responses, children with learning disabilities perform as well as achieving children (Stone & LaGreca, 1984). But when the emotions

are complex or subtle children with learning disabilities are less accurate in their representation process.

A second way to assess the representation process is to assess their understanding of others' intentions. Three studies of students with learning disabilities can be included here. Pearl and Cosden (1982) tested junior high school students' understanding of videotaped soap operas. The learning disabled were less accurate than achieving classmates in their inferences about the feelings of the characters, the social amenities in which they engaged and their intentions. A second study (Weiss, 1984) employed nondisabled males and males with learning disabilities, ages 11 to 15 years. The boys were asked to make inferences about how friendly or unfriendly videotaped interactions or verbal descriptions were of 2 or 3 boys who were engaged in neutral, friendly, cooperative, teasing, horseplay, fighting or angry. Weiss found that the males with learning disabilities interpreted videotaped interactions and verbal descriptions as more unfriendly than the nondisabled males. Although there were no group differences in the number or type of inferences expressed, the learning disabled injected more erroneous items in the verbal condition. A third example is a study examining children's detection of lies. There are developmental differences in children's ability to recognize when others are being deceitful or sarcastic, with sarcasm being the most difficult for children to detect. In a study for junior high students, Bryan, Pearl, & Fallon (1988) found students with learning disabilities less accurate than achieving classmates in detecting deception while both groups had difficulty comprehending sarcasm.

A third way of studying children's representation process skills has involved the use of measures of perspective taking. In this approach children's comprehension of social situations is assessed by having them respond to stories in which a main character becomes embroiled in a chain of psychological events, and a second character enters the scene mid-way in the story. The child has to relate the events from

the perspective of the main character and the by-stander thus indicating awareness that each character has a different perspective on the events. Ten studies using five different measures of perspective taking, and employing children up through 13.7 years of age, have compared the performances of students with learning disabilities and achieving classmates. Six of the ten studies found differences favoring achieving students. These differences could be attributable to a variety of factors: attention, listening skills, memory, and language, as well as poor perspective taking. However, these group differences were found when stimuli were present thus reducing the load on short term memory (Wong & Wong, 1980), and when only pointing responses were required thus reducing the load on language skills (Dickstein & Warren, 1980; Bruck & Hebert, 1982). Moreover, since in reality perspective-taking occurs in response to events that are fleeting in time/space, and demonstrations of understanding require instant verbal and nonverbal responses, it seems likely that problems in perspective taking may be a significant source of social problems experienced by children with learning disabilities.

A fourth way of assessing the representation process is seen in studies of referential communication. In these studies children are required to describe an object to a listener who cannot see the object. The adequacy of the communication is assessed by the listener's success in selecting the appropriate object from an array of options. In order to respond adequately the child has to recognize that the other person has access to different and less information, and to formulate a response taking these differences into account. This task requires cognitive and linguistic skills insofar as the child has to formulate a message that takes perspective differences into account. Research on students with learning disabilities suggests that they perform more poorly than achieving students when they are the speaker and have to generate the message, and, when they are the listener and have to request clarification in order to respond accurately (Donahue, Bryan & Pearl, 1980).

A fifth way of assessing the representation process is through children's moral development. The most well-known device is an interview in which children respond to hypothetical dilemmas involving conflicting moral issues in which the protagonist must choose to do one of two actions. The conflicting issues are: 1) life vs law (should Heinz break the law to save his wife's life?); 2) punishment vs conscience (should Heinz be punished if he was acting according to his conscience?); and 3) contract vs authority (should Joe obey his father or maintain a contractual agreement?). Children's responses are categorized based on Kohlberg's theory, an age/stage model with six levels of moral reasoning: 1)Punishment/Obedience (what is right is to avoid punishment); 2) Individual Instrumental Purpose and Exchange (right is doing what's best for one's own or another person's needs); 3) Mutual Interpersonal Expectations, Relationships, and Conformity (what is right is performing the way that others in your group expect); 4) Social System and Conscience Maintenance (right is doing one's duty in maintaining the system); 5) Prior right and Social Contracts (judgements based upon the basic rights, values and legal contracts of society even when they conflict with the rules and laws of a group); and 6) Universal Ethical Principles (right is guided by universal ethical principals that all humanity should follow). Two studies have compared moral development of students with learning disabilities. The first (Fincham, 1977) employed 8 and 9 year olds and found no group differences. It was found that nobody scored at level 5 and only one scored at level 4, thus both groups were clustered on the lower three rungs of the moral development ladder. In addition, the presentation of the stories was simplified by changing the lexical, idiomatic, syntactic, and sentence semantics and the discourse elements, and by providing subjects with pictures that portrayed the story plot. Derr (1986) used the standard format with 14.3 to 18.5 year old males with learning disabilities and nondisabled males. Derr found the males with learning disabilities to be significantly lower in their moral development than the nondisabled males. In light of the procedural differences it is difficult to compare the

results of these two studies. Nonetheless, accepting them at face value, the results suggest that differences between learning disabled and nondisabled youngsters in the representation process may not surface until students get older. Since the emotional and behavioral problems of children with learning disabilities tend to increase with age (Fincham, 1977; McKinney & Speece, 1986), it seems important to recognize that the representation process is not a skill that is acquired by some age, but one that increases as children age.

In sum, there is evidence that children with learning disabilities differ from achieving children in their ability to represent and interpret social cues. Whether the differences in their performance are related to difficulties in encoding, attention, or labeling the cues during short term memory remains to be determined. Since these studies have involved students up through age 17 years, it seems clear that problems in the representation process endure; and should not be viewed as a developmental lag. In addition, it is very important to note that it makes no sense to try to teach children appropriate social behaviors if in fact they are failing to tune into appropriate social cues, label those cues accurately for recall, use rehearsal or some device to store the information for recall, and come to a meaningful understanding of the cues.

Response Search Process

The third stage of the model has children engage in a generative process of searching for possible behavioral responses. The individual learns to apply rule structures (which are acquired through socialization) as a way of accessing reasonable responses to specific stimulus sets. The responses that are generated are influenced by the child's generative skills, acquired rule structures, past experience, available response repertoires, and the sequence of processing up to that point (i.e., encoding and representation).

The ability to generate alternative solutions has been defined as a focal social problem solving skill, at least for elementary-school aged children (Spivack, Platt, &

Shure, 1977); Weissberg, Gesten, Rapkin, Cowen, Davidson, Flores de Apodaca, & McKim, 1981). This skill has been found to differentiate disturbed from nondisturbed groups (Platt, Spivack, Altman, Altman & Peizer, 1974), and popular from unpopular children (Asher, & Renshaw, 1981), as well as to correlate with teacher-rated school adjustment (Spivack, et al, 1977). A number of studies have assessed the response search process of children with learning disabilities. Carlson (1987) assessed males with LD and nondisabled males using four open-ended hypothetical, peer related social situations. The males with LD were less skilled than the NLD males in the quantity and quality of strategies chosen to resolve two of the four situations. Also using responses to hypothetical situations, Oliva and LaGreca (1988) reported that males with LD were less skilled in developing "sophisticated" goals although their strategies to resolve the problems were judged as friendly as those of the NLD males. Toro, Weissberg, Guare, and Liebenstein (1990) assessed 7 to 11 year old boys and girls with and without learning disabilities with the Open Middle Interview (OMI; Polifka, Weissberg, Gesten, Flores de Apodaca, & Picolli, 1981). The OMI requires the child to generate as many different solutions as possible to four social problem situations: a) a child wants to take home the class gerbil that another child also wants to take; b) a child is teased about a new haircut; c) a child wants to ride a bike that a friend has been using for a long time; and d) a child borrows a friend's toy and loses it. The results found that children with LD performed more poorly than nondisabled children on alternative solutions (i.e., novel, goal-directed protagonist actions in response to the problem). Differences approached significance on solution variants (variations on themes of previously offered alternatives that indicate a repetitive tendency not considered to be a sign of good social problem solving skill).

Studies with junior high and high school students with LD have found essentially the same results. Silver and Young (1985) administered measures of social problem solving (Social Interaction Role Play Assessment, SIRPA, Waddell, 1984); the Means-

Ends Problem-Solving Procedure (MEPS; Platt & Spivack, 1975) and the Awareness of Consequences Test (ACT: Platt & Spivack, 1975) to learning disabled, low achieving and nondisabled eighth grade boys. The SIRPA assesses responses to situational themes of place, people and types of interaction (e.g., sympathy, anger) on 15 social problem situations. The ACT measures the degree to which an individual considers how his/her actions affect him/herself and others, and how others may react. The MEPS measures the strategies used to move toward a goal. The students with LD scored lower than the NLD but not the low achieving group (which had lower IQs than the LD). Schneider and Yoshida (1988) used five tests described by Platt and Spivack (1975, 1977) in addition to the Recognition of Problem Situations Test (subject articulates as many as possible problems people face); the Optional Thinking Test (subject describes all of the actions a person could do in order to solve four hypothetical interpersonal problems); and the Causal Thinking Test (four interpersonal situations in which the subjects considers what might have caused a problem in the story). Subjects were 30 junior high students with LD and 30 achieving adolescents. The adolescents with LD scores significantly lower than the nondisabled adolescents on 4 of the 5 measures: MEPS, Recognition of Problem Situations, Optional Thinking and Causal Thinking.

Using role-plays Pearl, Bryan, and Herzog (1988) assessed adolescents' "scripts" for situations in which adolescents request another to engage in illegal, inappropriate acts. Students were interviewed about 9 situations in which one teenager invites another to participate in an act of misconduct (e.g., steal a car, shoplift, graffiti, smoke marijuana, cut class, drink beer). The results found that high school students with LD differed from their achieving classmates in their expectations for more simple requests, were less likely to predict that the individual would feel bad, and showed less insight about situations in which the invitation is made. They generated fewer reasons for why someone would accept or refuse the request, and spontaneously suggested fewer

scenarios for what might ensue if such a response were made. Hence, in addition to having different expectations for how a peer might engage them in misconduct, they generated fewer reasons for why an adolescent might, or might not, get involved, and fewer notions about possible outcomes.

In sum, students with LD across a wide age span, and in self contained and mainstreamed programs show deficits in the response search process relative to their achieving classmates. It should be noted that responding on the measures used to assess the response search process is heavily dependent on verbal skills.

Response Decision Process

In this step the child evaluates the potential consequences of each generated response and estimates the probability of favorable outcomes. The child must take into account the environmental context and his/her own capabilities. One response may be effective in one context but not another. A particular response may not be effective because the child does not have the behavioral (verbal) skills to carry it out. The child's response repertoire is influenced by the child's mental representational skills. The response decision process has a direct feedback loop to the response search process.

Research related to students with learning disabilities skillfulness in the response search process has explored: 1) children's understanding of social norms and morals and 2) children expressed preferences for how they would act. Studies find that children with LD understand social norms and morals as well as achieving classmates (Bryan, Werner, & Pearl, 1982; Bryan, Sonnefeld, & Greenberg, 1981). However, when asked how they would actually respond, students with LD select social strategies that are inappropriate. For instance, Bryan, Sonnefeld, and Greenberg (1981) established preferred strategies for ingratiating oneself with parents, teachers and friends. Children with LD rated these strategies in the same way as comparison children, but indicated that they were more likely to use "oddball" strategies. Bryan, Werner, and Pearl, (1982) found adolescents with LD equally likely to conform to peer pressure to engage in

prosocial activities (e.g., shoveling snow for an elderly neighbor) but more likely to indicate they would conform to peer pressure to commit antisocial acts (e.g., take a car for a joyride, sneak into a movie).

Given their knowledge and understanding of the "rights and wrongs" and "coulds and shoulds", it is not clear why students with LD prefer social strategies that are inconsistent with achieving classmates. The decision process is affected by more than knowledge of what one should. Other factors such as past experience, motivation, social goals, and attributions (explanations for outcomes clearly play a role in the response decision process.

When we examine the research on attributions of students with LD, we find some clues as to why they might choose less-than-optimal behaviors. Our ideas, judgements, beliefs and feelings about ourselves mediate the responses we make to other people, and the decisions we make concerning cognitively demanding tasks. People who have positive self concepts, who believe that they can effectively deal with life's situations, and who believe that it is through their own effort and ability that they can achieve success are more likely to present a self confident face to the world, and persevere to attain whatever goals they set for themselves. In contrast, people who have negative self concepts, who see themselves as unable to deal effectively with life's challenges, and who believe that the fates (luck, other people) control their destinies are likely to avoid activities that they believe exceed their ability or coping capabilities, and undertake only those activities they judge themselves capable of successfully completing (Bandura, 1982). Because these beliefs about ourselves influence our interpretations of our experiences and the decisions we make, a review of the self concepts and attributions of students with learning disabilities are included here. This is to say that our social relationships with others are affected in part by our feelings and beliefs about ourselves.

Self Concepts. One of the most consistent findings is that students with LD have

more negative self concepts than their classmates. However, the scales that measure self concept typically include many items that ask students to rate how well they are doing in school. It is to be expected that students with LD would rate themselves more negatively than higher achieving classmates. When scales are used that assess feelings of self worth (rather than academic performance) students with LD are not found to differ from classmates (Winne, Woodlands, & Wong, 1982). In addition, self concepts are affected by social comparison processes. When students with LD spend some time in a resource room or a self-contained classroom with other LD students, they do not judge themselves quite so harshly (Morrison, Forness, & MacMillan, 1983; Renick, 1985).

On the negative side, students with LD rate themselves lower on academic self concepts than higher achieving classmates on school subjects in which they have had little or no experience (Chapman & Boersma, 1980; Butkowsky & Willows, 1980), feel less optimistic about the likelihood of future improvements in performance (Pearl, Bryan & Herzog, 1983), do not adjust their self concepts in response to academic success (Thomas, 1980), and do not respond to teachers' attempts to improve self concepts through failure free instruction, equal access to academic rewards, or nongraded classrooms (Thomas, 1980).

It is important to recognize that problems in self concept are not limited to the school years, but extend into young adulthood. High school seniors with LD report lower estimates of adjustment than comparison students (e.g., "I'm satisfied with myself", Gregory, Shanahan & Walberg, 1986). Adults with LD report that three of five problem areas are self image, affect and motivation (along with hyperactivity and organization; Buchanan & Wolf, 1986).

Attributions. A second area that has found students with LD to differ from achieving students is in attributions, beliefs about the causes of outcomes, or people's explanations for their successes and failures. Studies of students with LD consistently

find that they tend to believe that their successes result of a lack of ability. In contrast, achieving students tend to believe that their successes are the result of ability and hard work, and their failures are the result of a lack of effort. Although not all students with LD acquire the maladaptive pattern, children who experience failure very early and/or very frequently are at greatest risk to doubt their abilities (Kistner & Licht, 1984).

Children's beliefs about outcomes have been shown related to their responsiveness to instruction. Children who attribute their failure to a lack of ability tend to be less persistent (Licht, Kistner, Ozkaragoz, Shapiro, & Clausen, 1985), fail to generate problem solving strategies (Pearl, Bryan, & Herzog, 1983), do fewer problems and spend less time on problems (Butkowsky & Willows, 1980), and are pessimistic about future performance (Pearl, et al, 1983; Tollefson, Tracy, Johnsen, Buenning, Farmer, & Barke, 1982). In sum, failure to take personal credit for success while taking personal blame for failure, the attribution pattern held by significant numbers of students with LD, appears to have a debilitating impact upon performance, resulting in nonstrategic responses and self-blame, particularly when tasks are challenging.

Enactment Process

The fifth step is the enactment process. Once the child has selected a response, the child proceeds to act it out. Here the child must possess the verbal and motor skills to be successful in the enactment process.

One area of interest here is the child's classroom behavior. Understanding the social rules of the classroom and then responding appropriately are clearly very important in the life of the child. Indeed, a number of studies have found that classroom behavior is the critical element in a teacher's decision to refer a child for special education services. Studies of kindergarten and first grades find that low academic achievement by itself is insufficient to propel a teacher to make a referral to special education; rather, it is inappropriate classroom behavior and poor academic achievement progress that lead to the referral decision (Speece, & Cooper, 1990).

Studies conducted with teachers in first through eighth grade find that classroom teachers describe a bevy of inappropriate classroom behaviors under the rubric of "attention" that place a child at risk for referral to special education (Bay, Bryan, Shelden, & Simon, in press). Several classroom observation studies find that students with LD are more likely than nondisabled classmates to be off-task (Bryan & Wheeler, 1972; McKinney & Speece, 1986).

With respect to social behavior in the classroom, Levy and Gottlieb (1984) found that third, fourth and fifth grade students with LD were more frequently observed to be alone, and less frequently oriented toward activities or social interactions on the playground than their classmates. The girls with LD seemed to have difficulty gaining entrance into activity groups: they skirted the group and remained on the periphery. The younger boys did not have difficulty entering groups but had a tendency to wander in and out of activities. In contrast, Sainato, Zigmond, and Strain (1983) found no differences in lunchroom interactions (or sociometric status) of third, fourth and fifth grade boys with and without LD.

Making inferences about children's social relationships based on classroom observations is problematic. Classroom, playground, and lunchroom observations provide important information about children who are aggressive or socially withdrawn, and about young children. But as children get older their friendships are increasingly based on intimacy and shared experiences. There are important sex differences as boys tend to congregate in groups, and interactions revolve around sports events. Females, however, tend to cluster in small cliques. In both cases, the quality of interaction becomes increasingly important. Hence, verbal interactions that are not easily heard by adults become an important part of determining children's social status.

There have been several studies of the communicative competence of children with learning disabilities. Studies of communicative competence focus on the use of language in social contexts that require one to: 1) take into account characteristics of

the audience, 2) understand what is already known and what is new information to a listener, and 3) understand and adhere to the rules that govern conversations, like knowing how to begin and end a conversation.

We take audience characteristics into account as we speak differently to different audiences: to older versus younger people, to strangers versus intimates, to teachers versus parents versus siblings, to males versus females. Adjusting one's speech to be appropriate to an audience requires social cognitive skills as well as linguistic skills. There are some differences between LD and NLD children. Boys with learning disabilities make adjustments in their communications that reflect confusion. For instance, they are less likely than peers to simplify their communications to a younger child, and they are more polite to peers than to adults (Donahue, 1981). Girls with learning disabilities, on the other hand, seem more adept in making these adjustments, but tend to be overly deferential to all audiences. Both boys and girls with learning disabilities have been found to be less tactful than nondisabled peers. Thus when required to deliver bad news to a friend, they were less likely than classmates to couch the bad news in ameliorative tones. For instance when telling a friend he/she could not go for ice cream because there was not enough room in the car, the students with LD were less likely to add that the friend could come next time.

With respect to understanding the rules that govern conversation, students with LD are no different from NLD students. They take as many turns, make as many statements: they are full participants in conversational exchanges, and an assessment of participation would find no differences. Differences emerge, however, when analyses consider the content of the communications and the outcomes. Studies find that students with LD are less persuasive than NLD students. This is because they tend to agree more, disagree less, and ask fewer questions than their classmates. They are less likely to argue their position, and less likely to "hold the floor" (say "um" or "uh, yes" while they think of what to say next). In conversations with others, students with LD are

less likely to ask open ended questions, questions that would sustain the conversation. In a problem solving task with their mothers, they were less likely to disagree and make a case for their opinions.

A significant part of communicative competence is nonverbal behaviors. We signal our feelings, intentions, comprehension (or lack of comprehension) using facial expressions, eye contact and gaze, body lean, tone of voice, and insertions like "uh huh". A series of studies conducted by James Bryan (Bryan & Perlmutter, 1979; Bryan & Sherman, 1980; Bryan, Bryan, & Sonnefeld, 1982) had "blind judges", audiences with no knowledge of the child, view videotaped films of learning and nondisabled children being interviewed by an adult about their favorite television program, or simulating a TV talk show. Following the film, sometimes shown with no sound and for periods as short as 30 seconds, the child was rated on a questionnaire for social adaptability and hostility. College students, mothers, and other children all rated the children with LD to be less adaptable than NLD children. These studies found that children with LD produce negative first impressions in "blind judges", impressions that are formed quickly, are reliable after about 30 seconds of viewing, and appear to be based on the nonverbal behavior of the child.

Can these differences in communicative competence and nonverbal behaviors be taught? Donahue and Bryan (1984) examined the impact of a two-minute audio tape in which one child modeled asking open ended questions and responding with positive feedback. Children with LD who heard the audio significantly increased the number of open ended questions that they asked. James Bryan, in one of his studies, instructed children to make a good impression on the adult prior to the interview about their favorite TV shows. Children who were given this instruction elicited judgements from the blind judges that were equivalent to ratings given NLD children.

In sum, studies of the social enactment process find that students with LD do not differ from NLD students on fundamental skills. The differences between groups are

subtle, and found when examined for the role adopted by students with LD, and the impact they have upon an audience. To be persuasive, tactful, sustain a conversation, make a good first impression, to disagree and argue a contrary position, to give positive and negative feedback are basic communication skills that transcend the classroom; indeed these are skills that are critical for adults at work and at home.

The Last Word.

A few final comments about research on social factors in learning disabilities are in order. It is difficult to translate the results of this research into practice. Research studies report group trends: learning disabled children are more or less likely than achieving children to exhibit some characteristic. This does not say that all learning disabled children will exhibit the characteristics or that none of the achieving will do so. Furthermore the results cannot tell us which learning disabled children are more or less likely to exhibit the characteristics in question. In the social domain, the problems of translating research into practice is compounded by the fact that we are in the initial stages of building a technology of assessment and intervention.

With this in mind, we can acknowledge that the past decade has seen an exponential leap in our knowledge of social factors in learning disabilities. Overall, the learning disabled differ from achieving children in their attitudes toward themselves and others' attitudes toward them: in both cases the attitudes toward the learning disabled are more negative. But we do not yet know the source of these attitudes. Are their attributions about their successes and failures causes, outcomes, or correlates of academic failure? Is peer rejection the result of poor academic performance in settings where such performance is highly valued, or, are off-task behavior and ill-timed social initiations the cause? The learning disabled know social norms, yet choose less appropriate social strategies. Why? Are the findings concerning social cognition, role taking, communicative competence related to attentional deficits, language deficits, or something else? How do the studies of information processing relate to studies of

social status and social competence? Will studies of sub-groups find social status and social skills differences among sub-groups?

There are many more questions than answers about social factors in learning disabilities. What we know is that as a group they are less skillful than their higher achieving classmates on measures of social cognition, role-taking, and communicative competence. They appear to be highly motivated to avoid failure and public confirmation of their incompetence, and may go to some lengths to avoid detection. They are also highly motivated to gain peer approval, and indicate willingness to go to some lengths here as well. When social problems are experienced, or perceived to exist, they appear to endure beyond school into the adult years. Yet, progress has been made in developing methods to assess and remediate deficits in social skills. It is our responsibility as learning disability specialists to take their social problems seriously, to treat them as we would academic difficulties, with the best technology we have.

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